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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/057,530	01/25/2002	Paul L. Lagraff	LAG 0104 PUS	3015

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EXAMINER

RAEVIS, ROBERT R

ART UNIT PAPER NUMBER

2856

DATE MAILED: 06/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/057,530

Applicant(s)

LAGRAFF ET AL.

Examiner

Robert R. Raevis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 June 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 and 20-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7 is/are allowed.
- 6) ☒ Claim(s) 8-11 and 20-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \*   c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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### DETAILED ACTION

Claims 22-34, and 37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 22, "diameter" (line 2 from last) is not consistent with "non-circular" (last line). ✓

As to claim 27, "outlet opening" lacks antecedent basis. ✓

As to claim 37, "said upper housing" lacks antecedent basis. ✓

Claims 35-38, 41 and 42 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Smith.

Smith teaches a sampler, including: housing 22, 10, recess type retaining mechanism 35 to hold a slide, inlet 23, bore (interior cross sectional area of the house immediately on both sides of beam 4) which allows air to flow around the slide, and outlet passage (interior cross sectional area of the housing immediately below the beam 4) that is in fluid communication with the bore and vacuum source 18.

As to claims 35, 36, 37, Smith teaches the "bore" and "outlet passage" in the manner explained immediately above. Also, note that that the "bore" and "outlet passage" are in face different due to the beam 4.

As to claim 38, note Figure 3's inlet 23.

As to claims 41, 42, note the rectangular slit in the top portion 22 of Figure 2.

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Claims 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith as applied to claim 35 above, and further in view of either Langer or Marpel '475.

As to claim 39, it would have been obvious to employ either Langer's laminar flow producing aperture 16 or Marpel's nozzle 20 in place of Smith's slit as either Langer or Marpel teach that these two differently (from Smith) shaped apertures will successfully allow for a sampling of particles in an impactor.

As to claim 40, Marpel's nozzle 20 provides for both venture and laminar sections.

Claims 8, 9, 20, 21, 22, 23, 33, 25, 26, 35-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith, in view of Marpel '475.

Smith does not clearly employ a "laminar portion" in its inlet.

As to claims 8, 9, 20, 21, 22, 23, 33, 25, 26, it would have been obvious to employ Marpel's nozzle 20 in place of Smith's slit as Marpel teaches that this differently (from Smith) shaped aperture will successfully allow for a sampling of particles in an impactor. In addition, either the passage around beam 4 (and immediately there below) may be deemed to be an outlet, or Marpel teaches (Figure 1) that a pump may be exteriorly located from the housing to allow for an increased ease of replacing vacuum sources.

Smith does not describe the "outlet" in his written specification.

As to claims 35, 36, 37, 41, 42, it would have been obvious to employ an outlet on the housing ~~was~~ for connection to a vacuum source as Marpel teaches (Figure 1)

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that a pump may be exteriorly located from the housing to allow for an increased ease of replacing vacuum sources.

As to claims 38 and 39, it would have been obvious to employ Marpel's nozzle for Smith's inlet as Marpel teaches that such an orifice allows for representative sampling with impactors.

As to claims 20, 21, note Marpel's "rectangular" (col. 4, line 17) teaching of non-circular, and that the distance from the aperture 20 to the impactor surface is "elongated" relative to the width of the rectangular inlet aperture.

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith in view of Marpel as applied to claim 8 above, and further in view of Berger.

As to claims 10 and 11, Berger refers (col. 5, lines 28+) to the need for a flow stability and pressure differential, suggestive of calibration for impact particle sampling.

Claims 27-32, 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith in view of either Marpel or McFarland et al.

Smith teaches everything, but arguably does state that the housing has an outlet in communication with a vacuum source, and does not describe the two different openings.

As to claims 27, 28, 29, 30, it would have been obvious to employ either Marpel's dual size opening 20 or McFarland's variable size opening 49 because either Marpel or McFarland teach that such openings may provide for accurate sampling of particles in impactors. Also, either the passage around beam 4 (and immediately there below) may

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be deemed to be an outlet, or Marpel teaches (Figure 1) that a pump may be exteriorly located from the housing to allow for an increased ease of replacing vacuum sources.

As to claims 31, 32 note McFarland's slit shaped aperture 49, said aperture being "generally" rectangular.

As to claim 34, Marpel teaches both laminar and venturi portions in nozzle 20.

As to claim 1, note was made of the term "slit" in combination with "venturi section" and "laminar section", with remaining claim limitations.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert R. Raemis whose telephone number is 703-305-4919. The examiner can normally be reached on Monday to Friday from 6:30am to 4:00pm. The fax phone number for the organization where this application or proceeding is assigned is 703-308-7722.

*Rowe*  
*RAEMIS*